

## REMARKS/ARGUMENTS

The Office action dated December 10, 2008 has been received and carefully considered. By this amendment, claims 1, 8, 10, and 18 have been amended. After entry of this amendment, claims 1-20 will be pending. In view of the amendments and the following remarks, Applicants respectfully request reconsideration.

### **35 USC §102**

The Office rejected **claims 1, 4-8, 10-11, and 17** as being anticipated by Boniello et al. (U.S. Pat. No. 4,867,992) as evidenced by Fabian (WO97/42831), Duvic et al. (U.S. Pat. No. 5,792,931), and Blanc et al. (J Agric Food Chem 1998). The applicant respectfully disagrees, especially in view of the amendments herein.

As amended, *claim 1* expressly requires that an optionally comminuted *whole coffee cherry* or extract thereof is included into a *solid food product*, a *tea*, a *juice*, or a *carbonated beverage*. These elements are neither taught nor suggested in Boniello.

Similarly, *claim 10* expressly requires a step of *commminuting the whole coffee cherry*, which is also neither taught nor suggested in Boniello.

It should be noted that the claims must be interpreted as broadly as their terms reasonably allow (see e.g., *In re American Academy of Science Tech Center*, 367 F.3d 1359, 1369, 70 USPQ2d 1827, 1834 (Fed. Cir. 2004)). This means that the words of the claim must be given their plain meaning unless the plain meaning is inconsistent with the specification (see e.g., *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989); *Chef America, Inc. v. Lamb-Weston, Inc.*, 358 F.3d 1371, 1372, 69 USPQ2d 1857 (Fed. Cir. 2004)). It is also noted that the ordinary and customary meaning of a term may be evidenced by a variety of sources, including the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art (*Phillips v. AWH Corp.*, 415 F.3d at 1314, 75 USPQ2d).

In the instant case, the broadest reasonable interpretation as well as the plain meaning of the term "whole coffee cherry" is unambiguously the entire and intact fruit of the coffee tree, which is further supported in applicant's definition of that term (see specification page 5, line 25

et seq.). Boniello et al. fail to make any reference to the whole fruit. Indeed, Boniello et al. only teach use of ground green coffee beans and/or by products (pulp, husks, and mucilage) as part of a fermentation broth for microorganisms.

Regarding the examiner's reference to Fabian, it should be appreciated that although most mycotoxin concentrations are indeed relatively small, even small concentrations are dangerous to mammals when ingested. Thus, Fabian teaches solvent-based methods for detoxification. Such is not the case with the present claims. Indeed, in at least some aspects of the inventive subject matter, the coffee cherries are quick-dried such that levels of mycotoxins remain below an undesirable threshold, which is entirely inconsistent with Fabian's teaching. On a finer note, Fabian is concerned with detoxification of green coffee beans whereas the claims specify mycotoxin levels on whole coffee cherries.

Regarding Duvic, the office stated that "...There are many different types of mycotoxins which are natural present of a preservative in coffee cherry including fumonisins as emphasized in Duvick et al. (paragraph 75) including fumonisins in coffee. It is further expected that the low range amount of the same in the product of Fabian would provide the some amount preservation effect...(office action page 3, line 7 et seq.)" It is not clear to the applicant what the examiner intends to express. The '931 patent has no line, paragraph, or column 75. Duvick teaches various transgenic plants that express an enzyme that degrades fumonisins. How such teaching would relate to the claimed subject matter is unclear. Clarification is respectfully requested.

Regarding Blanc, it should be pointed out that this reference is exclusively concerned with the presence of ochratoxin A on green coffee beans in the process of roasting and the preparation of a soluble coffee product. Such is entirely inconsistent with the instant claims.

Consequently, for at least these reasons, claims 1, 4-8, 10-11, and 17 should not be deemed anticipated by the cited art.

### **35 USC §103**

The Office rejected **claims 9 and 12-14** as being obvious over Boniello et al. in view of Drunen et al. (U.S. Pat. No. 6,572,915). The applicant again respectfully disagrees for various reasons.

First, and with respect to the office's application of Boniello to claims 1 and 10, the same considerations, arguments, and defects apply and are not reiterated here. Once more, Boniello does not teach, suggest, or motivate to use whole coffee cherries in his product and processes. On the contrary, the '992 patent exclusively teaches use of soluble coffee solids in the preparation of a fermentation broth to obtain a flavoring product enriched in diacetyl to enhance flavor and aroma of a coffee product. Van Drunen fails to remedy these defects.

Second, the applicant particularly points to column 1, lines 5-22 and lines 56-58 in which it should be readily evident that the '915 patent is drawn to agricultural waste products and not to the whole coffee cherry as presently claimed. Therefore, a combination of the soluble solids as taught by Boniello with the waste products (*i.e.*, coffee cherry pulp without the seed) of Van Drunen fails to provide all of the claimed elements. Indeed, both references, alone or in combination, teach away, if not even against the presently claimed subject matter.

Third, it appears as though the office misconstrues the cited reference by stating that "...Drunen et al. teaches a food product is beverage, juice (col. 2, lines 47-48) and carbonated drinks (col. 1, line 67)..." With respect to the beverage and juice, it should be noted that Van Drunen teaches that:

"...Finally the antioxidants and any other extracted material are added back to the very same final food product as that generated the agricultural wastes. Thus, the final product will contain only natural material present in the original crop but will be enriched with antioxidants and other useful material that originally and naturally belong to the original crop. The final fruit juice, processed fruit, or coffee will be all natural but "healthier" than present similar products..."

Thus, whatever is extracted from coffee waste products (but not the whole coffee cherry) is simply added back to a coffee beverage, which is inconsistent with the claimed subject matter.

Furthermore, and regarding claims 12-14 it seems as though the office equated solvent extraction with a chromatographic process. Such equation is incorrect. It is noted that solvent extraction is based on differential solubilities of various compounds in two immiscible fluids. In contrast, chromatography is a physical method of separation in which the components to be

separated are distributed between two phases, one of which is stationary (stationary phase) while the other (the mobile phase) moves in a definite direction [IUPAC Compendium].

Moreover, with respect to the motivation of the person of ordinary skill in the art to combine Boniello with Van Drunen, the following is noted: Boniello is entirely silent on the issue of mycotoxins and as such a combination with Van Drunen fails to provide any benefit. Similarly, as Boniello is concerned with production of flavoring agents, and as Boniello already succeeded in an improved flavor, Van Drunen again fails to improve any of Boniello's products. Thus, there is no motivation in the references that would motivate a person of ordinary skill in the art to modify Boniello using Van Drunen. Still further, and ignoring the lack of motivation, it is noted that both Boniello and Van Drunen add the compositions obtained back to coffee. Such combination, however, is not claimed. Consequently, claims 9 and 12-14 should not be deemed obvious over the cited art.

The Office rejected **claims 2-3 and 15-16** as being obvious over Boniello et al. in view of Sivetz et al. (Coffee Technology 1979). The applicant once more respectfully disagrees.

Again, and with respect to the examiner's application of Boniello to claims 1 and 10, the same considerations, arguments, and defects apply and are not reiterated here. Boniello does not teach, suggest, or motivate to use whole coffee cherries in his product and processes. Sivetz fails to remedy this defect.

Indeed, Sivetz teaches processing of coffee fruit to obtain coffee beans, and the office failed to provide any passage in Sivetz that would teach inclusion of the whole coffee cherry or extract thereof in a product. Furthermore, it is noted that while Sivetz teaches strip-picking and with that teaches harvesting of sub-ripe cherries, it is once again only coffee beans in Sivetz that constitute the product.

Regarding the alleged teaching of "quick-drying" by Sivetz, it is not clear to the applicant where such teaching finds support in Sivetz. Moreover, it is noted that the term "quick-drying" is defined in the instant application (page 6, line 22 et seq). This definition is clearly not met by Sivetz.

With respect to the examiner's statement on page 6 reading : "...It would have been obvious to one of ordinary skill in the art to use combine teachings of Boniello et al. and Sivetz et al. before him or her, to modify invention of Sivetz et al. to all stages in ripeness and drying of coffee cherry in coffee processing to include in beverage foodstuff of Boniello et al....", it is entirely unclear to the applicant what the office intends to express. Once again, Boniello et al. are concerned with fermentative production of a flavorant for a coffee product using various coffee based materials. Sivetz merely teaches that is known to harvest coffee cherries at sub-ripe stages to reduce labor cost in the coffee bean production. As Boniello can use coffee by-products that are waste and so even less expensive than green coffee cherries, the examiner's argument of economic advantages are not at all persuasive. Consequently, claims 2-3 and 15-16 should not be deemed obvious over the cited art.

The Office further rejected **claims 18-20** as being obvious over Van Drunen et al. in view of The Free Dictionary by Farlex. The applicant once again respectfully disagrees.

Most significantly, Van Drunen does not teach use of a whole coffee cherry, but use of agricultural waste products in coffee production. It should be readily apparent that a waste product as defined by Van Drunen is not the same or obvious over a whole coffee cherry as presently claimed. The citation of the Free Dictionary fails to remedy this defect. Consequently, claims 18-20 should not be deemed obvious over the cited art.

**Request For Allowance**

Claims 1-20 are pending in this application. The applicant requests allowance of all pending claims.

Respectfully submitted,  
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